

REMARKS

The latest non-final Office Action was issued in response to Applicants' communication of 15 January 2004. The non-final Office Action rejected all of the pending claims (claims 3-6 and 23-25). Claims 1-2 and 17-22 were previously canceled.

Claim 12 has been rejected under 35 U.S.C. Section 112, second paragraph as being indefinite on the ground that claim 12 is an omnibus claim because it fails to point out what is included or excluded by the claim language. The rejection is hereby traversed and reconsideration is respectfully requested.

Claim 12 is dependent on claim 3. Claim 3 as previously amended is directed to a slurry comprising from about 50 to about 80% by weight of substantially spherical alkali metal bicarbonate particles meeting specific criteria with respect to median particle size, surface area. The slurry meets certain criteria with respect to loose bulk density and Zeta potential. The slurry is required to be stable and is prepared in the absence of a suspending aid. Claim 3 has not been rejected under 35 U.S.C. Section 112.

Claim 12 provides a further limitation with respect to claim 3. The further limitation is that the sodium bicarbonate particles must have an IR spectra shown in Figure 1. The IR spectra shown in Figure 1 is definite. One of ordinary skill in the art

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would know precisely what is being claimed by claim 12. One of ordinary skill in the art could readily determine whether the bicarbonate particles contained within a slurry had a IR spectra the same as Figure 1. Accordingly, claim 12 is definite and meets the requirements of 35 U.S.C. Section 112.

The Office Action states that claim 12 is interpreted to include the phrase "such as". There is no such phrase in the claim and any such interpretation is clearly outside the literal language of claim 12. Claim 12 provides a further limitation of claim 3. That limitation is the specific IR spectra shown in Figure 1. The claim does not include any reference to any other spectra and therefore is definite. Claim 12, of course, further limits the bicarbonate particles of claim 3 because they are required to have the particular IR spectra shown in Figure 1. Claim 12, therefore, further limits claim 3 but is not indefinite because one of ordinary skill in the art would be able to view the IR spectra of Figure 1 and determine whether bicarbonate particles did or did not meet the IR spectra of Figure 1. Accordingly, the rejection of claim 12 under 35 U.S.C. Section 112 is improper and should be withdrawn.

Claim 24 has been amended to remove all reference to suspending aids. Accordingly, the rejection of claims 3 and 24 under 35 U.S.C. Section 112 as set forth on pages 2 and 3 of the Office Action is deemed overcome.

The dependency of claim 7 has been changed since claim 7 as originally cast was dependent on claim 6 and therefore redundant and claim 15 has been amended to provide proper antecedent basis.

The Office Action states that water, alcohol and glycols as set forth in claim 25 can be considered suspending aids. This objection is hereby traversed and reconsideration is respectfully requested.

Claim 3 is directed to a slurry in which substantially spherical alkali metal bicarbonate particles are dispersed in a liquid media. Claim 25 is specifically directed to a preferred group of liquid media including water, alcohols, glycols and mixtures thereof. The term "suspending aids" as used in claim 3 refers to additives (not the liquid medium) which may be used to facilitate suspension of the alkali metal bicarbonate particles within the liquid media. Claim 3 is definite and meets the requirements of 35 U.S.C. Section 112 because there are no additives which primarily function as suspending aids added to the slurry composition. It is therefore submitted that claims 3, 24 and 25 are fully consistent with the application as filed.

Claims 3-13 and 23-25 stand rejected as obvious over Cheng et al. (U.S. Patent No. 4,414,130). The reference is stated to disclose an improved particulate detergent composition comprising sodium bicarbonate particles and other alkali metal salts. The rejection is hereby traversed and reconsideration is respectfully requested.

The present invention is directed to a slurry comprising from about 50 to about 80% by weight of substantially spherical alkali metal bicarbonate particles. A slurry containing these particles as specifically described in claim 3 is stable for months

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and does not require the presence of a suspending aid (see the bottom of page 4 of the specification). The slurry is particularly suited to be used in the preparation of a dialyzate and is prepared in a manner set forth in the second full paragraph on page 6 of the specification. The slurry may contain in addition to alkali metal bicarbonate particles, fragrances, colorants, surfactants, buffers, abrasives, and active agents such as antioxidants.

Cheng et al. is not directed to a slurry comprising from about 50 to 80% by weight of substantially spherical alkali metal bicarbonate particles. The reference is concerned with zeolites, especially certain synthetic amorphous zeolites and crystal molecular sieve zeolites which are useful ion exchangers or ion exchange agents for calcium ion and can therefore be used to improve the detergency of synthetic organic detergents (column 1, lines 50-58). Because the zeolite particles are not released as quickly as desired, they are made into finely divided particles. The description of the finely divided particles is set forth at column 4, lines 40-50. The Office Action indicates that it's the sodium bicarbonate particles that have these characteristics, when in fact the reference is referring to zeolites having the formulation set forth at the top of column 3 of the reference.

In order to improve upon the zeolite particles for the production of detergents, water soluble binders are employed to agglomerate or otherwise hold together the finely divided zeolite particles. The binders include water soluble starches, salts, gums, sugars, polymers and non-ionic surface active materials as disclosed at column 5, lines 18-23 and lines 55-60. These binder materials are agglomerated

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with the zeolites to form larger particles or agglomerates. It is noted at column 5, line 38 that the dissolution speed of the thus prepared agglomerate may be increased by incorporating into the agglomerate an effervescent material such as sodium bicarbonate.

Accordingly, the reference teaches an agglomeration of zeolite, binder (e.g. potato starch) and the optional use of sodium bicarbonate as part of the agglomerate to obtain an effervescent property. The particle size of the zeolite (not of the agglomerate) is disclosed at column 4, lines 40-50 which the Office Action states is the particle size of sodium bicarbonate. This is incorrect. The sodium bicarbonate does not appear alone but only as part of an agglomerate which necessarily must have a larger particle size than the zeolite per se.

Accordingly, the reference teaches an agglomeration of three principle components including the optional use of sodium bicarbonate. In order to arrive at the claimed invention, one would have to forsake the use of agglomerates which would be a teaching against the reference invention. There is no teaching or suggestion in the reference of using sodium bicarbonate particles alone in the absence of the agglomerate and therefore the reference relates to an entirely different mass of particles than that claimed in the present invention.

The Examples of the reference show the preparation of insoluble detergent builder particulate agglomerates made from zeolite and a binder material such as starch. In Example 1 and in many of the Examples which follow, zeolites are present

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in a predominant amount of the slurry (e.g. above 50% by weight). The only reference to sodium carbonate is in Example 6 where sodium carbonate is present in an amount of 13%. There is no teaching or suggestion of preparing a slurry wherein about 50 to about 80% of the slurry is the sodium bicarbonate particles.

The amount of the sodium bicarbonate particles in the present slurry far exceeds anything taught or suggested in the reference. Furthermore, this is not a case where the only difference between what is disclosed in the reference and the present invention is the concentration of the bicarbonate particles. As previously indicated, the reference discloses an entirely different type of particle which is an agglomerate of three components (when bicarbonate is present) wherein the two principal components (zeolites and binders such as starch) are not present in the present composition because there is no presence of an agglomerate in the present slurry. It is therefore submitted that the claims of the application are not obvious over Cheng et al. Withdrawal of the rejection under 35 U.S.C. Section 103 is therefore deemed proper and is respectfully requested.

The claims of the application are rejected over the combination of Cheng et al. in view of Lajoie (U.S. Patent No. 5,411,750) and further in view of Itob et al. (U.S. Patent No. 5,071,558). Lajoie is stated to disclose alkali metal powders consisting of sodium bicarbonate with a particle size of 4 to 12 microns and other characteristics for use in a deodorant composition. Itob et al. is stated to disclose a dialyzate comprising sodium bicarbonate particles having a particle size of at most 250 microns and a water content of 0.5 to 25% by weight. The Office Action concludes

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that one of ordinary skill in the art would expect to obtain a slurry composition as set forth in the present claims. The rejection is hereby traversed and reconsideration is respectfully requested.

Lajoie et al. discloses the preparation of sodium bicarbonate particles which have a fine particle size as noted in the Office Action. The particles are added to a liquid medium and an example of the preparation of an antiperspirant-deodorant cosmetic stick product is disclosed in the reference.

It is noted in Example 3 that a slurry is prepared by mixing the following ingredients silicon oil (600 lbs.), diisopropyl adipate (60 lbs.), PPG 14 (40 lbs.), stearyl alcohol (340 lbs.), Castor wax (60 lbs.), eicosanol (10 lbs.), PEG 600 (40 lbs.), Cab-o-sil (15 lbs.), aluminum zirconium tetrachlorohydrate (480 lbs.) which is combined with sodium bicarbonate (140 lbs.), fragrance (6 lbs.), and additional silicon oil (245 lbs.) to form a homogenous suspension. From the above, it is apparent that the amount of the sodium bicarbonate is only about 6.8% which is far below the minimum amount required in the slurry of the present invention. Furthermore, there is no teaching or suggestion of how to prepare a slurry containing such a significant amount of sodium bicarbonate which is stable and is prepared in the absence of a suspending agent.

The combination of Cheng et al. and Lajoie et al. clearly does not lead one of ordinary skill in the art to the claimed invention for the reasons discussed above and particularly since Cheng et al. relates to an entirely different composition (an

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agglomerate containing zeolite, a binder such as potato starch, and optionally sodium bicarbonate).

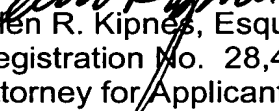
The citation of Itob et al. does not cure the deficiencies of the primary references. The reference discloses the preparation of granule A and granule B. Granule A does not contain sodium bicarbonate. Accordingly, the reference is relevant only with regard to the preparation of granule B which is prepared as disclosed beginning at the bottom of column 5. Sodium bicarbonate and sodium chloride are pulverized to an average particle size of about 15 microns. The major portion of the two component system is sodium bicarbonate and the two components are added to water in the amount of 14% by weight. The mixture is granulated by means of a twin-screw extruder to produce cylindrical granules having a diameter of 0.5 mm and then added to order to form a slurry (column 6, lines 28-31). Accordingly, the object of the reference invention is to form granules which have a much larger particle size than that set forth in the present claims.

In view of the foregoing, Applicants submit that the present application is in condition for allowance and early passage to issue is therefore deemed proper and is respectfully requested.

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It is believed that no fee is due in connection with this matter. However, if any fee is due, it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,


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